

## Answers to T/F Floodplain Questions

1. **Q:** The average annual flood losses in the United States are currently estimated at \$4.5 million.

**A: False.** Average annual flood losses within the U.S. are estimated at \$6 billion.

2. **Q:** The CRS program is a state permitting program for stormwater quality.

**A: False.** The CRS program is the Community Rating System program administered by the National Flood Insurance Program. It allows communities who are exceeding the minimum federal standards for floodplain management to receive points that will decrease the costs of flood insurance for those in the community. The rating system ranges from 1 to 10, with 1 being the highest, and 10 reflecting a community that meets only the minimum federal requirements. Each rating higher than a Class 10 gains the community a 5 % reduction in flood insurance rates. Lincoln is a class 8, and currently receives a 10% reduction.

3. **Q:** The FEMA-mapped floodplains take into account the 1-foot rise that will occur if the flood fringe is filled.

**A: False.** While the FEMA models anticipate a 1-foot rise in flood heights caused by filling in the flood fringe, this rise is not reflected in the boundaries of the floodplain shown on the FEMA floodplain maps. If a rise in flood heights occur, the floodplain boundaries will expand and additional land or structures will be brought into the floodplain.

4. **Q:** Floodplains preserved in their natural state help to reduce the number and severity of floods, assist in handling stormwater runoff and minimize non-point water pollution.

**A: True.** Natural floodplain areas reduce flood velocities and flood peaks, and curb sedimentation in waterways by allowing floodwater to slow down and sediments to settle out. Natural vegetation filters out impurities and uses nutrients to improve water quality. These natural controls also contribute to recharging groundwater by promoting infiltration and recharging aquifers.

5. **Q:** The most common major natural disaster declaration is due to flooding.

**A: True.** There were 43 major natural disaster declarations by the federal government in 2001. 21 were from flooding or a combination of storms and flooding, 10 were from severe or winter storms, six from tropical storm incidents, three from tornadoes, two from earthquakes, and one from a freeze.

6. **Q:** If a community experiences a 100-year flood event, the chances of having a 100-year flood event in the next 10 years is greatly reduced.

**A: False.** The “100-year flood” is really a misnomer, because it is the flood event that has a 1% chance of being equaled or exceeded *in any given year*. There are examples of communities which have experienced two 100-year flood events just a few years apart.

7. **Q:** Three feet of standing water can collapse the walls of a frame house.

**A: True.** The weight of standing water puts hydrostatic pressure on a structure. The deeper the water, the more it weighs and the greater the hydrostatic pressure. Because water is fluid, it exerts the same amount of pressure sideways (lateral pressure) as it does downward. As water gets deeper, it exerts more lateral pressure than shallow water. Most walls are not built to withstand lateral pressure. Studies and tests have shown that the lateral force presented by three feet of standing water can be enough to collapse the walls of a typical frame house.

8. **Q:** The penalty for filling in a floodplain without a permit in Lincoln is up to \$5,000.

**A: False.** The penalty is a \$100.00 fine which can be charged for every day that the violation continues after notification.

9. **Q:** All federally regulated or insured lending institutions must require people to purchase flood insurance in order to receive a loan to buy, construct, or substantially improve any building in the 100-year floodplain.

**A: True.** The Flood Disaster Protection Act of 1973 and the National Flood Insurance Reform Act of 1994 mandate the purchase of flood insurance as a condition of Federal or Federally related financial assistance for acquisition and/or construction of buildings in the FEMA-mapped floodplain of any community.

10. **Q:** Floodplains serve two functions: conveyance and storage of flood water.

**A: True.** Conveyance and storage of flood water are two different functions of the floodplain, and there are different types of models used to model these functions. The FEMA regulations and model only address conveyance. Conveyance areas are located along the stream channel and adjacent overbank area. Obstructions in a channel or conveyance area such as bridges and culverts cause an increase in flood heights upstream of the obstruction.

The FEMA hydraulic models do not take into consideration flood storage outside the conveyance areas of the floodplain. Especially in flat areas, the floodplain provides a valuable function by storing floodwaters. Fill in a flood fringe area will cause increased flood heights downstream.